

CLAIMS

What is claimed is:

1. A multiple circuit receptacle system, said system comprising:

said power supply means for supplying electrical power to said multiple circuit receptacle system, said power supply means supplying said electrical power in the form of a plurality of power supply circuits; and

5 an outlet receptacle block having receptacle means adapted to be electrically connected to selectively interconnected electrical devices, said outlet receptacle block further having receptacle circuit means for electrically and selectively coupling said receptacle means to said power supply means in a plurality of spacial orientations., with each of said spacial orientations causing a different one of said plurality of said power
10 supply circuits to be electrically coupled to said receptacle means.

2. A multiple circuit receptacle systems in accordance with claim 1, characterized in that said receptacle circuit means comprises a plurality of electrical receptacle connector sets, each of said receptacle connector sets adapted to be electrically and selectively coupled to said power supply means.

3. A multiple circuit receptacle system in accordance with claim 2, characterized in that a particular one of said power supply circuits to which said receptacle means is coupled at any given time is dependent, in part, on which of said receptacle connector sets is electrically coupled to said power supply means.

4. A multiple circuit receptacle system in accordance with claim 2, characterized in that:

said plurality of receptacle connector sets comprises a first receptacle connector

set and a second receptacle connector set;

5 said first receptacle connector set being capable of being electrically coupled to
said power supply means in a first spacial orientation, thereby electrically coupling a first
one of said power supply circuits to said receptacle means;

10 said first receptacle connector set further being capable of being electrically
coupled to said power supply means in a second spacial orientation, thereby electrically
coupling a second one of said power supply circuits to said receptacle means;

 said second receptacle connector set being capable of being electrically coupled to
said power supply means in a third spacial orientation, thereby electrically coupling a
third one of said power supply circuits to said receptacle means; and

15 said second receptacle connector set further being capable of being electrically
coupled to said power supply means in a fourth spacial orientation, thereby electrically
coupling a fourth one of said power supply circuits to said receptacle means.

5. A multiple circuit receptacle system in accordance with claim 1,
characterized in that:

 said receptacle circuit means comprises at least one receptacle connector set;

5 electrically coupling said at least one receptacle connector set to said power
supply means in a first spacial orientation relative to said power supply means results in a
first one of said plurality of power supply circuits being electrically coupled to said
receptacle means; and

 electrically coupling said at least one receptacle connector set to said power

supply means in a second spacial orientation relative to said power supply means results
10 in a second one of said plurality of power supply circuits being electrically coupled to
said receptacle means.

6. A multiple circuit receptacle system in accordance with claim 1,
characterized in that:

said outlet receptacle block comprises a first side and a second side, said second
side facing in an opposing direction to said first side; and

5 said receptacle means comprises at least a first outlet receptacle on said first side
of said outlet receptacle block, and at least a second outlet receptacle on said second side
of said outlet receptacle block.

7. A multiple circuit receptacle system in accordance with claim 2,
characterized in that said circuit means comprises:

a first receptacle connector set extending outwardly on a first end of said outlet
receptacle block; and

5 a second receptacle connector set extending outwardly on a second end of said
outlet receptacle block.

8. A multiple circuit receptacle system in accordance with claim 1,
characterized in that said power supply means comprises junction block means, said junction
block means comprising:

incoming power supply connector means for receiving incoming electrical power;

5 and

outgoing junction block connector means electrically coupled to said incoming

power supply connector means, and connectible to said receptacle circuit means for supplying said incoming power to said receptacle means.

9. A multiple circuit receptacle system in accordance with claim 8, characterized in that:

said receptacle circuit means comprises a first receptacle connector set and a second receptacle connector set;

5 said outgoing junction block connector means comprises a first outgoing junction block connector set;

connecting said first receptacle connector set to said outgoing junction block connector set, with said outlet receptacle block set being in a first spacial orientation relative to said first outgoing junction block connector set, results in said receptacle means being electrically coupled to a first one of said plurality of power supply circuits;

10 connecting said first receptacle connector set to said first outgoing junction block connector set, with said outlet receptacle block being in a second spacial orientation relative to said outgoing junction block connect set, results in said receptacle means being electrically coupled to a second one of said power supply circuits;

15 connecting said second receptacle connector set to said first outgoing junction block connector set, with said outlet receptacle block being in a third spacial orientation relative to said first outgoing junction block connector set, results in said receptacle means being electrically coupled to a third one of said plurality of said power supply circuits; and

20 connecting said second receptacle connector set to said first outgoing junction

block connector set, with said outlet receptacle block being in a fourth spacial orientation relative to said first outgoing junction block connector set results in said receptacle means being electrically coupled to a fourth one of said plurality if said power supply circuits.

10. A multiple circuit receptacle system in accordance with claim 8,
characterized in that:

said outgoing junction block connector means comprises a first outgoing junction
block connector set located on a first side of said junction block, and a second outgoing
5 junction block connector set located on a second side of said junction block, said second
side opposing said first side; and

said receptacle circuit means is configured so as to be capable of electrically
coupling to either of said first outgoing junction block connector set or said second
outgoing junction block connector set.

11. A multiple circuit receptacle system in accordance with claim 1,
characterized in that:

said receptacle circuit means comprises a first receptacle connector set associated
with a first end of said outlet receptacle block, and a second receptacle connector set
5 associated with a second end of said outlet receptacle block, said second receptacle end
being opposed to said first receptacle end;

said first receptacle connector set having a plurality of terminals positioned so as
to form a first configuration;

said second receptacle connector set having a plurality of terminals positioned so
10 as to form a second configuration.

said outlet receptacle block having a top portion and a bottom portion, said

bottom portion opposing said top portion;

said power supply means having a junction block with a first junction block connector set electrically coupled to said plurality of power supply circuits;

15 connection of said plurality of terminals of said first receptacle connector set to said first junction block connector set, with said outlet receptacle block being in a first spacial orientation, results in said receptacle means being electrically coupled to a first one of said plurality of said power supply circuits;

20 connection of said plurality of terminals of said second receptacle connector set to said first junction block connector set, with said outlet receptacle block being in a second spacial orientation relative to said junction block, results in said receptacle means being electrically coupled to a second one of said power supply circuits, when, in moving said outlet receptacle block from said first spacial orientation to said second spacial orientation, said outlet receptacle block is flipped end-to-end relative to said first junction
25 block connector set;

connection of said plurality of terminals of said first receptacle connector set to said first junction block connector set, with said outlet receptacle block being in a third spacial orientation, relative to said junction block results in said receptacle means being electrically coupled to a third one of said plurality of power supply circuits, when, in
30 moving said outlet receptacle block from said second spacial orientation to said third spacial orientation, said outlet receptacle block is flipped so as to reverse the positions of its top portion and its bottom portion, relative to said first junction block connector set;
and

connection of said plurality of terminals of said second receptacle connector set

35 to said first junction block connector set with said outlet receptacle block being in a
fourth spacial orientation relative to said junction block, results in said receptacle means
being electrically coupled to a fourth one of said plurality of said power supply circuits,
when, in moving said outlet receptacle block from said third spacial orientation to said
fourth spacial orientation, said outlet receptacle block is flipped end-to-end relative to
40 said first junction block connector set.

12. A multiple circuit receptacle system in accordance with claim 11,
characterized in that:

said first junction block connector set is associated with a first side of said
junction block, and said junction block further comprises a second junction block
5 connector set electrically coupled to said plurality of power supply circuits, with said
second junction block connector set being associated with a second side of said junction
block, said second side of said junction block opposing said first side of said junction
block;

connection of said plurality of terminals of said first receptacle connector set to
10 said second junction block connector set, with said outlet receptacle block being in a fifth
spacial orientation relative to said junction block, results in said outlet receptacle means
being electrically coupled to said first one of said plurality of power supply circuits;

connection of said plurality of terminals of said second receptacle connector set to
said second junction block connector set, with said outlet receptacle block being in a
15 sixth spacial orientation relative to said junction block, results in said receptacle means
being electrically coupled to said second one of said plurality of power supply circuits,
when, in moving said outlet receptacle block from said fifth spacial orientation to said

sixth spacial orientation, said outlet receptacle block is flipped end-to-end relative to said second junction block connector set;

20 connection of said plurality of terminals of said first receptacle connector set to said second junction block connector set, with said outlet receptacle block being in a seventh spacial orientation relative to said junction block, results in said receptacle means being electrically coupled to said third one of said plurality of said power supply circuits, when, and moving said outlet receptacle block from said sixth to said seventh spacial
25 orientation, said outlet receptacle block is flipped so as to reverse the positions of its top portion and bottom portion, relative to said second junction block connector set; and

connection of said plurality of terminals of said second receptacle connector set to said second junction block connector set, with said outlet receptacle block being in an eighth spacial orientation relative to the junction block, results in said receptacle means
30 being electrically coupled to said fourth one of said plurality of said power supply circuits, when, in moving said outlet receptacle block from said seventh spacial orientation to said eighth spacial orientation, said outlet receptacle block is flipped end-to-end relative to said second junction block connector set.

13. A multiple circuit receptacle system in accordance with claim 1, characterized in that:

said outlet receptacle block comprises latch means;

said power supply means comprises at least one junction block having tab means;

5 and

said latch means and said tab means cooperate so as to prevent said receptacle circuit means from inadvertently releasing from said junction block in the absence of any

externally exerted forces on said outlet receptacle block, when said receptacle means is electrically coupled to said junction block.

14. A multiple circuit receptacle system in accordance with claim 13, characterized in that:

said latch means comprises locking latches positioned on top and bottom portions of said outlet receptacle block, each of said locking latches being of a resilient construction;

said tab means comprises an upstanding tab, so that when said outlet receptacle block is first brought into position to be electrically coupled to said junction block, said tab exerts upwardly directed forces on at least one of said locking latches, thereby causing said at least one locking latch to resiliently deflect upward;

said tab and said at least one locking latch are sized and configured so that when said tab has caused said at least one locking latch to resiliently deflect upwardly, manual forces can be exerted sideways on said outlet receptacle block, so as to move said receptacle circuit means into electrical coupling with said power supply means; and

when said power supply means is electrically coupled to said receptacle circuit means, said at least one locking latch is positioned to the side of said tab in a non-deflected state; and

when said at least one locking latch is positioned to the side of said tab, said receptacle circuit means are prevented from becoming decoupled from said power supply means, in the absence of external forces being directed upwardly on said at least one locking latch, so as to resiliently deflect upwardly said at least one locking latch.

15. A multiple circuit receptacle system in accordance with claim 1,
characterized in that said plurality of power supply circuits each comprise at least one hot
conductor; and at least two of said hot conductors of two of said plurality of power supply
circuits are physically separated by at least one of either a ground conductor or a neutral
conductor.

16. A multiple circuit receptacle system in accordance with claim 1,
characterized in that:

said power supply means supplies said electrical power in the form of an 8-wire
supply, with said 8-wire supply comprising four hot conductors, two neutral conductors
and two ground conductors; and

each of said hot conductors is physically separated by at least one of either of said
neutral conductors or said ground conductors.

17. A multiple circuit receptacle system, said system comprising:
incoming power in the form of a plurality of power supply circuits;
at least one junction block having incoming connector means for electrically
coupling said plurality of power supply circuits to said junction block;
said junction block comprising means for transmitting said incoming power to a
first outgoing connector set;

an outlet receptacle block having a plurality of outlet receptacles adapted to be
electrically connected to selectively interconnected electrical devices, said outlet
receptacle block having a first receptacle connector set with a plurality of first terminals
therein, said first terminals adapted to be electrically and selectively coupled to said first
outgoing connector set in a plurality of spatial orientations, with each of said spatial

orientations causing a different one of said plurality of said power supply circuits to be electrically coupled to said plurality of said outlet receptacles.

18. A multiple circuit receptacle system in accordance with claim 17, characterized in that said outlet receptacle block further comprises a second connector set having a second set of terminals therein, with said second set of terminals being adapted to electrically and selectively couple said outlet receptacle block to said first outgoing connector set in a plurality of spatial orientations, with each of said spatial orientations causing a different one of said plurality of said power supply circuits to be electrically coupled to said plurality of outlet receptacles.

19. A multiple circuit receptacle system in accordance with claim 18, characterized in that said junction block comprises a second outgoing connector set adapted to be selectively and electrically coupled to said first terminals and said second terminals of said outlet receptacle block, and where said second outgoing connector set is located on a side of said junction block opposing a side of said junction block on which said first outgoing connector set is located.

20. A multiple circuit receptacle system in accordance with claim 18, characterized in that said outlet receptacle block comprises a plurality of bus bars electrically connecting said first terminals and said second terminals to said outlet receptacles.

21. A system for supplying electrical power to a receptacle system, said system comprising:
a source of incoming electrical power;
a junction block electrically connected to said source of incoming electrical power;

an outlet receptacle block adapted to be selectively and electrically coupled to said source of incoming electrical power through said junction block; and

said outlet receptacle block comprises a plurality of outlet receptacles, with at least one outlet receptacle located on each of two opposing sides of said outlet receptacle block.

22. A multiple circuit receptacle system in accordance with claim 1,

characterized in that:

said outlet receptacle block comprises at least one outlet receptacle having hot, neutral and ground receptacle terminals, with said receptacle terminals being connected to hot, neutral and ground bus bars, respectively; and

said outlet receptacle block provides for selectively and electrically coupling any one of at least three of said power supply circuits to said receptacle means, in the absence of any overlapping of any two of said bus bars, and with said power supply circuits having hot, neutral and ground terminals, and where any two of said hot terminals are separated by an intermediate one of said ground terminals or an intermediate one of said neutral terminals.